

What is claimed is:

1. A multimedia electronic education system, comprising:

a plurality of client devices;

5 a recording server for recording a real-time lecture, for automatically converting said recorded lecture into a format capable of being used for a non-real-time remote program, and for storing said converted lecture;

an MDBM (Multimedia Data Broadcasting Module) server for connecting said plurality of client devices to each other and for broadcasting data to be transferred
10 during said real-time lecture to all said client devices and said recording server; and,

a management server for transmitting lecture notes to said client devices and said recording server and for performing user authentication.

2. The system as claimed in claim 1, wherein each of said client devices includes
15 an image input portion (VFW; Video For Windows) for capturing an image inputted through a camera, for automatically inputting data input time values thereto, and for transmitting them to a splitter portion, said splitter portion operative for copying said captured image, for transmitting one of said copied images to a MUX (Multiplexor), and for displaying the other of said copied images on the video window of a client
20 program through a window video renderer; a voice converting portion for sampling voice data inputted through a sound card and for converting said sampled voice data together with said data input time values into voice data of a different format; and, said MUX for operative multiplexing said captured image data, said converted voice data,

and event data inputted through a keyboard or mouse and transmitting them to said MDBM server.

3. The system as claimed in claim 2, wherein said MUX searches the time values
5 appended to said inputted image, said voice and event data, extracts data having identical time values, incorporates said extracted data into a piece of data, appends original time values to said incorporated data, and subsequently transmits them together with control data to said MDBM server.

10 4. The system as claimed in claim 2, wherein each of said client devices includes a DEMUX (demultiplexor) for demultiplexing data transmitted from said MDBM server into said captured image data, said converted voice data, and said event data; an image output portion for displaying said image data on said video window; a voice output portion for transmitting said voice data to said sound card; and, a lecture output portion
15 for displaying said event data together with said lecture notes previously downloaded by said management server on said client device.

5. The system as claimed in claim 4, wherein said DEMUX performs said demultiplexing by appending original time values to said inputted image, voice, and
20 event data again.

6. The system as claimed in claim 1, wherein said recording server processes data received from said MDBM and said management servers, wherein said data received

from said MDBM server are demultiplexed into image data, voice data, and event data so that said image and voice data are incorporated and converted into a predetermined multimedia file for transmission, which in turn is stored, and wherein said event data are synchronized with an image lecture file received by and stored in said management
5 server so that they are stored as a lecture file.

7. The system as claimed in claim 6, wherein said multimedia file and lecture file are subsequently incorporated into one file, which in turn is stored in a separate storage media.
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8. The system as claimed in claim 6, wherein said multimedia file and lecture file are stored in a separate storage media, and said lecture file includes information on an address in which said multimedia file is stored.

15 9. The system as claimed in claim 7, wherein said incorporated multimedia file and lecture file can be played back in said client device.

10. The system as claimed in claim 8, wherein said lecture file can be played back in said client device, and upon playing back thereof, said client device reads said
20 multimedia storing address included in said lecture file and receives said multimedia file from said multimedia storing address.

11. A method for generating a lecture file using the recorder of a lecture-producing program by a lecturer, comprising the steps of:

preparing an event list while counting the lecture time;

if a lecturer's voice is inputted, generating a voice file together with
5 information on said counted lecture time;

upon the input of an event, storing start or end time and type of said event in said event list; and,

synchronizing said voice file with events registered in said event list according to the information on said lecture time and for separately or integrally storing said voice
10 file and said events.

12. The method as claimed in claim 11, wherein said step of generating said voice file includes the step of incorporating information on said lecture time into said previously stored voice file.

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13. The method as claimed in claim 11, wherein said start or end time of said event is directly inputted by said lecturer.

14. The method as claimed in claim 11, wherein said event includes a line, a circle,
20 a box, an OLE object, and a multimedia file.

15. The method as claimed in claim 11, wherein said event list includes information on a plurality of events at one start or end time.

16. The method as claimed in claim 15, wherein if there is said information on the plurality of events at the same start or end time, said information on the plurality of events further includes additional identification information and can be identified at the same start or end time according to said additional identification information, and
5 wherein the selection of said additional identification information allows relevant events to be displayed.

17. The method as claimed in claim 16, wherein said recorder comprises a time line window for editing said start and end times of said lecture and events; a recording tool
10 bar for providing recording tools; an event list window for editing said start and end times of each event; an event tool bar for providing event editing tools; and, a main window screen on which lecture notes and said events are displayed.

18. The method as claimed in claim 17, wherein said start and end times of said
15 event inputted through said event list window can be modified by adjusting said start and end times of said event displayed on said time line window.

19. The method as claimed in claim 18, wherein said start and end times of said event displayed on said time line window are interlocked with said start and end times
20 of said event inputted through said event list window.

20. A multimedia electronic education method, comprising the steps of:
 loading a lecture file and checking the overall lecture time;
 generating a time table array having a size corresponding to said overall lecture time;

5 searching start and end times of all events in an event list;
 generating an event data structure in said time table array corresponding to periods of said event's existence according to said start and end times of all said events, storing the addresses of said event data structure in said time table array, generating a start and end event array in said event data structure, and storing relevant start and end event addresses in said start and end event array; and,

10 if there are said addresses of said event data structure in said time table array corresponding to said lecture time while increasing said lecture time, loading an event of relevant start and end event addresses stored in said start event array and said end event array in said event data structure, and starting or ending said event.

15 21. The method as claimed in claim 20, wherein said time table array corresponding to a period during which no said event is designated as "Null."

22. The method as claimed in claim 20, further comprising the step of reproducing
 20 said voice file according to said increased lecture time.